

LIST OF CURRENT CLAIMS

1. (Currently Amended) A composition for forming a security coding, the composition comprising at least one pair of mutually associated luminescent substances, said at least one pair including first and second luminescent substances which emit in a joint emission range located outside the visible spectral range, the emission spectra of the first and second luminescent substances overlapping in at least a subrange of said joint emission range such that the emission spectrum of the first luminescent substance is complemented characteristically by the emission spectrum of the second luminescent substance, wherein the first and second luminescent substances emit in the subrange with respective emission spectra peaks so close as to practically prevent individual recognition of the first and second luminescent substances from an envelope of luminescent emissions defined by the joint emission range without further information, whereby the composition is to define an envelope of luminescence emissions usable as a security coding.

2. (Previously Presented) The composition according to claim 1, wherein said joint emission range extends in a range of from about 750 nm to about 2500 nm.

3. (Previously Presented) The composition according to claim 1, wherein at least one of the first and second luminescent substance is formed on the basis of a doped host lattice.

4. (Previously Presented) The composition according to claim 1, wherein at least one of the first and second luminescent substance is formed on the basis of a host lattice doped with rare earth elements.

5. (Previously Presented) The composition according to claim 4, wherein the host lattice is doped with one or more of dopants selected from the group consisting of neodymium, erbium, holmium, thulium, ytterbium, praseodymium, and dysprosium.

6. (Previously Presented) The composition according to claim 1, wherein at least one of the first and second luminescent substance is formed on the basis of a host lattice doped with a chromophore, the chromophore being selected from the group consisting of scandium, titanium, vanadium, chromium, manganese, iron, cobalt, nickel, copper and zinc.

7. (Previously Presented) The composition according to claim 6, wherein at least one of the host lattices is doped with a plurality of chromophores.

8. (Previously Presented) The composition according to claim 3, wherein at least one of the host lattices is formed by a mixed crystal.

9. (Previously Presented) The composition according to claim 3, wherein the first and second luminescent substances are formed on the basis of different host lattices which have crystal fields of different strength and which are each doped with the same dopant.

10. (Previously Presented) The composition according to claim 1, wherein the subrange where the emission spectra of the first and second luminescent substances complementarily overlap has a width of 200 nm or less.

11. (Previously Presented) The composition according to claim 1, wherein the subrange where the emission spectra of the first and second luminescent substances complementarily overlap extends in a range of from about 850 nm to about 970 nm.

12. (Previously Presented) The composition according to claim 1, wherein the first and second luminescent substances have in said subrange at least one emission line in each case whose positions have a distance apart of about 30 nm or less.

13. (Previously Presented) The composition according to claim 1, wherein the coding contains a third luminescent substance which has at least one emission line outside said subrange.

14. (Previously Presented) The composition according to claim 13, wherein the at least one emission line is outside the visible spectral range.

15. (Previously Presented) The composition according to claim 1, wherein the coding system includes a plurality of pairs of said mutually associated luminescent substances.

16. (Previously Presented) The composition according to claim 15, wherein the subranges where the emission spectra of the first and second luminescent substances of a pair overlap each other complementarily are different for different pairs of mutually associated luminescent substances.

17. (Previously Presented) The composition according to claim 1, wherein the coding has at least a third luminescent substance which likewise emits in said subrange, and the emission spectrum of the first and third luminescent substance is complemented characteristically.

18. (Currently Amended) A value document comprising a composition[[,]] forming a security coding and , said composition comprising at least one pair of mutually associated luminescent substances, said at least one pair including first and second luminescent substances which emit in a joint emission range located outside the visible spectral range, the emission spectrum of the first and second luminescent substances overlapping in at least a subrange of the said joint emission range such that the emission spectrum of the first luminescent substance is complemented characteristically by the emission spectrum of the second luminescent substance, wherein the first and second luminescent substances emit in the subrange with respective emission spectra peaks so close as to practically prevent individual recognition of the first and second luminescent substances within an envelope of luminescent emissions defined by the joint emission range without further information, whereby the composition is to define an envelope of luminescence emissions usable as a security coding for the document.

19. (Previously Presented) The value document according to claim 18, said composition comprising at least two pairs of said mutually associated luminous substances.

20. (Currently Amended) The composition according to claim 1 or 18, wherein said joint emission range extends in a range of from about 800 nm to about 2200 nm.

21. (Currently Amended) The composition according to claim 1 or 18, wherein said joint emission range extends in a range of from about 1000 nm to about 1700 nm.

22. (Currently Amended) The composition according to claim 1 or 18, wherein the subrange where the emission spectra of the first and second luminescent substances complementarily overlap extends in a range of from about 920 nm to about 1060 nm.

23. (Currently Amended) The composition according to claim 1 or 18, wherein the subrange where the emission spectra of the first and second luminescent substances complementarily overlap extends in a range of from about 1040 nm to about 1140 nm.

24. (Currently Amended) The composition according to claim 1 or 18, wherein the subrange where the emission spectra of the first and second luminescent substances complementarily overlap extends in a range of from about 1100 nm to about 1400 nm.

25. (Currently Amended) The composition according to claim 1 or 18, wherein the subrange where the emission spectra of the first and second luminescent substances complementarily overlap extends in a range of from about 1100 nm to about 1250 nm.

26. (Currently Amended) The composition according to claim 1 or 18, wherein the subrange where the emission spectra of the first and second luminescent substances complementarily overlap extends in a range of from about 1120 nm to about 1220 nm.

27. (Currently Amended) The composition according to claim 1 or 18, wherein the subrange where the emission spectra of the first and second luminescent substances complementarily overlap extends in a range of from about 1300 nm to about 1500 nm.

28. (Currently Amended) The composition according to claim 1 or 18, wherein the subrange where the emission spectra of the first and second luminescent substances complementarily overlap extends in a range of from about 1400 nm to about 1700 nm.